

CLAIMS

I Claim:

1. In a frequency band, a method of intelligent frequency hopping,
comprising:
5 sampling a plurality of channels in the frequency band;
 identifying each channel in the plurality of channels as a good
channel or a bad channel as a function of a predetermined factor; and
 assigning the good channels to a good window and the bad
channels to a bad window.
- 10 2. The method of claim 1 wherein sampling the plurality of channels
samples all channels available to a network.
3. The method of claim 1 wherein the good channel is defined as a
channel having at least a predetermined Quality Level of Service.
- 15 4. The method of claim 1 wherein the bad channel is defined as a
channel having less than a predetermined Quality Level of Service.

5. The method of claim 1 wherein each window has at least four slots to which the channels may be assigned.

6. The method of claim 1 wherein each window has an even number of slots to which the channels may be assigned.

5 7. The method of claim 1 further comprising determining a ratio of the good channels in the band to the bad channels in the band.

8. The method of claim 7 further comprising assigning a first size to the good window, and a second size to the bad window, such that the ratio of the size of the good window to the size of the bad window is the same as the ratio of the good channels in the band to the bad channels in the band (the ratio).
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9. The method of claim 7 further comprising assigning a first size to the good window, and a second size to the bad window, such that the ratio of one plus the size of the good window to the size of the bad window is the same as the ratio of the good channels in the band to the bad channels in the band (the ratio).
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10. The method of claim 7 further comprising the act of assigning a first size to a good window, and a second size to a bad window, such that the ratio of the size of the good window to one plus the size of the bad window is the same as the ratio of the good channels in the band to the bad channels in the band (the ratio).

11. The method of claim 1 further comprising sampling at least one channel in an original hopping sequence.

12. The method of claim 11 further comprising generating the good window by assigning the good channels to the good window.

13. The method of claim 11 further comprising generating the bad window by assigning the bad channels to the bad window.

14. The method of claim 12 further comprising detecting the good channel, and assigning the good channel to the good window, when a good window is being generated.

15. The method of claim 13 further comprising the act of detecting the bad channel, and assigning the bad channel to a bad window, when a bad window is being generated.

16. The method of claim 12 further comprising the act of detecting the bad channel, and ignoring the bad channel, when the good window is being generated.

17. The method of claim 13 further comprising the act of detecting the good channel, and ignoring the good channel, when the bad window is being generated.

18. The method of claim 1 wherein all of the channels in the good window are used before any channels in the bad window are used.

19. A method of intelligent frequency hopping, comprising:
- sampling channels of a frequency band;
 - identifying each channel in the frequency band as a good channel or a bad channel;
 - determining a ratio of the good channels to the bad channels (the ratio);
 - assigning a first size to a good window, and a second size to a bad window, such that the ratio of the size of the good window to the size of the bad window is the same as the ratio; and
 - assigning a plurality of the good channels to the good window and a plurality of the bad channels to the bad window.

20. A method of intelligent frequency hopping, comprising:
- sampling channels of a frequency band;
 - identifying each channel in the frequency band as a good channel or a bad channel;
 - determining a ratio of the good channels to the bad channels (the ratio);
 - assigning a first size to a good window, and a second size to a bad window, such that the ratio of the size of the good window to the size of the bad window is the same as the ratio;
 - assigning a plurality of the good channels to the good window and a plurality of the bad channels to the bad window; and
 - using all of the channels in the good window before using any channels in the bad window.